

NIH Reviewer Orientation

The description below of the NIH Peer Review process is divided into three parts: pre-meeting responsibilities, activities at the meeting, and post-meeting responsibilities. All eligible (without Conflicts of Interest) Scientific Review Group (SRG) members participate in the evaluation of an application. The SRG members assigned to a particular application include the primary, secondary, or tertiary reviewers; mail reviewers; and discussants.

This orientation guide provides an overview of the review process, and information about reviewer tasks and responsibilities.

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PRE-MEETING ACTIVITIES

Summary

- Examine your review assignments, review materials (including applications), and instructions
- Review all applications pending review in the meeting for conflict of interest or the appearance of conflict of interest
- Review your application assignments for concerns related to content match with your expertise
- Review the "NIH Conflict of Interest, Confidentiality and Non-Disclosure Rules: Information for Reviewers of Grant Application and R&D Contract Proposals"; complete, sign and return the NIH pre-review certification form
- Read, evaluate, and write a critique for each of your assigned applications (discussants may be asked to provide an "Overall Impact" critique)
- Gain access to and upload critiques and preliminary overall impact/priority scores and individual criterion scores to the Internet Assisted Review (IAR) site for the applications assigned to you; a deadline will be provided by the Scientific Review Officer (SRO)
- Read posted critiques for your assigned applications and all other applications (access to applications where reviewer has Conflict of Interest will be denied)
- Prepare for discussions at the meeting

Reviewing the Applications

Written Critique

- Reviewers will use bullets to note strengths and weaknesses for each of the scored review criteria, and should provide context for their comments based on the project (e.g., refer to a Specific Aim)
- Reviewers will write a [paragraph](#) summarizing the factors that informed their Overall Impact score
- Download the critique templates and enter bulleted comments directly into the document (if you prefer to compose your critique in a separate document, you may wish to “paste special” – as plain text - to retain the bulleted format)
- When finished, upload the document to IAR
- Please see the [Critique Template Instructions](#) for more information on working with the critique templates

Scoring

- The NIH grant application [scoring system](#) uses a 9-point scale for the overall impact/priority score and individual scores for (at least) five scored criteria
 - A score of 1 indicates an exceptionally strong application with essentially no weaknesses
 - A score of 9 indicates an application with serious and substantive weaknesses with very few strengths
 - 5 is considered an average score
- No formula is used to derive the overall impact/priority score from the individual criterion scores, and reviewers are instructed to weigh the different criteria as they see fit in deriving their overall scores
- Ratings are in whole numbers only (no decimal ratings)
- Reviewers enter scores into IAR (not on the template)
- Please see the [Scoring System and Procedure](#) for more information on scoring
- Reviewers will score an application as presented in its entirety, and may not modify their scores on the assumption that a portion of the work proposed will be deleted or modified according to the SRG's recommendations

Review Criteria and Considerations

- Applications are evaluated for scientific and technical merit according to the Scored Review Criteria, Additional Review Criteria, and Additional Review Considerations for each application
- More details about the Review Criteria for common award mechanisms are found in [Review Criteria at-a-Glance](#)

Overall Impact

- Reviewers will provide an overall impact/priority score and critique to reflect their assessment of the likelihood for the project to exert a sustained, powerful influence on the research field(s) involved, in consideration of the following five scored review criteria, and additional review criteria (as applicable for the project proposed)
- Reviewers will provide a paragraph summarizing the factors that informed their Overall Impact score
- Note that an application does not need to be strong in all categories to be judged likely to have major scientific impact and thus deserve a high impact/priority score
 - For example, an investigator may propose to carry out important work that by its nature is not innovative but is essential to move a field forward

Scored Review Criteria

- Reviewers will consider each of the scored review criteria in the determination of scientific and technical merit, and give a separate score for each
- Most Funding Opportunity Announcements have five scored review criteria
- For example, the [five scored criteria](#) for research grant applications are Significance, Investigator(s), Innovation, Approach, and Environment

Additional Review Criteria

- When applicable, reviewers will consider the additional review criteria in the determination of scientific and technical merit
- Reviewers will not give separate scores for these items
- Examples include the following (see [Review Criteria at-a-Glance](#) for details):
 - [Protections for Human Subjects](#)
 - [Inclusion of Women, Minorities, and Children](#)
 - [Vertebrate Animals](#)
 - Biohazards
 - Resubmissions
 - Renewals
 - [Revisions](#)

Additional Review Considerations

- When applicable, reviewers will comment on each of the following items, but will not assign scores and should not consider these items when determining an impact/priority score
- Program staff will consider reviewer comments on these items when making funding decisions
- Examples include the following (see [Review Criteria at-a-Glance](#) for details)
 - Applications from Foreign Organizations
 - Select Agents
 - [Resource Sharing Plans](#)
 - [Budget and Period of Support](#)

Additional Comments to the Applicant

- Reviewers may provide guidance to the applicant or recommend against resubmission without fundamental revision.

MEETING ACTIVITIES

Summary

- The SRO will begin the meeting by reviewing policies and describing meeting procedures
- In some SRGs, applications are reviewed based on the preliminary, overall impact/priority score (beginning with the best scores)
- Applications will be grouped together when feasible (e.g., same mechanisms, new investigators, or clinical applications)
- In most cases, only the more meritorious applications (based on preliminary scores) will be discussed at the meeting
 - Applications that are discussed at the meeting will receive a final impact/priority score, individually assigned reviewer criterion scores, a

- summary statement with critiques, and a resume and summary of the discussion
- Applications that are not discussed will receive summary statements containing written critiques and individual criterion scores from assigned reviewers and in some cases discussants

Presentation and Discussion

- Applications will be introduced by the Chair of the SRG
- Assigned reviewers will share their preliminary overall impact/priority score and should be prepared to explain the significance of the problem and the overall impact the research will have on the field
- Group discussion follows assigned reviewer presentations
- Open discussion of scientific merit may result in disparate levels of enthusiasm
 - The reasons for any disparities should be made clear to allow for both an informed vote by all panel members, and also a high quality summary statement
- Because consideration of human subject protections, inclusion plans, vertebrate animals or biohazards can reflect scientific and technical merit, these elements are discussed before moving to a final scoring

Final Score and Voting

- Based on the presentation and discussion, and the preliminary overall impact/priority score from each assigned reviewer, each discussed application is given a score by all reviewers who are eligible to vote on that application
 - Both regularly appointed and temporary members vote on each application for which they do not have a conflict of interest
 - Mail reviewers do not vote final, overall impact/priority scores
- Reviewers may use non-numeric impact/priority scores, as appropriate:
 - AB – abstain from voting
 - CF – conflict of interest; did not participate in the discussion and scoring
 - NP – not present during discussion
- The following scenarios require a committee decision
 - ND - not discussed
 - NR - not recommended for further consideration (may reflect a lack of substantial merit or serious ethical problems in human or animal use)
 - DF - deferred
- If a particular score is considered an outlier (i.e. “out of range”), the reviewer must have stated his/her concerns during the discussion so that they can be reflected in the final summary statement
- The scores from all eligible reviewers for a given application are averaged (calculated to one decimal point) to determine the final overall impact/priority score
- A final overall impact/priority score and summary of the discussion will be included in the summary statement

POST-MEETING ACTIVITIES

- After the meeting, the SRO sets an “Edit Phase” in IAR
- Reviewers should edit their criterion scores and critiques to reflect any changes to their preliminary assessment
- Reviewers must sign their post-meeting electronic Conflict of Interest (eCOI) form in IAR

ETHICAL CONDUCT OF REVIEWERS

Conflict of Interest

- Situations that create conflicts of interest or the appearance of conflict of interest are described in the pre-meeting eCOI documents
- Check for potential conflicts of interest (or appearances of conflicts) and alert the SRO immediately of any conflicts of which you are aware.
- During the meeting, if a reviewer has a real or apparent conflict of interest with any application, the reviewer must leave the room during evaluation and scoring of that application
- In signing the post-review certification forms, each reviewer certifies that he/she did not participate in an evaluation of any application or proposal with which he/she knowingly had a conflict of interest

Confidentiality

- Respect for the privacy of the investigators' ideas is important; all applications and related materials are privileged communications that cannot be shown to or discussed with unauthorized individuals
- In signing the pre-review and post-review certification forms, each reviewer certifies that he/she fully understands the confidential nature of the review process and agrees to confidentiality and non-disclosure
- Reviewers are required to leave all review materials (that are not in the public domain) with the SRO at the conclusion of the review meeting

Research Misconduct

- Research misconduct is defined as fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results, but not honest error or differences of opinion
- It is vital that you do not make allegations of potential misconduct in the critique
 - Instead, such concerns must be brought to the attention of the SRO in a confidential manner, preferably before the study section meets